ALBA

Model 665

General Description: An A.M./F.M. portable receiver covering M.W. and V.H.F. bands. A socket is fitted for the connection of an earphone with 60 ohms impedance.

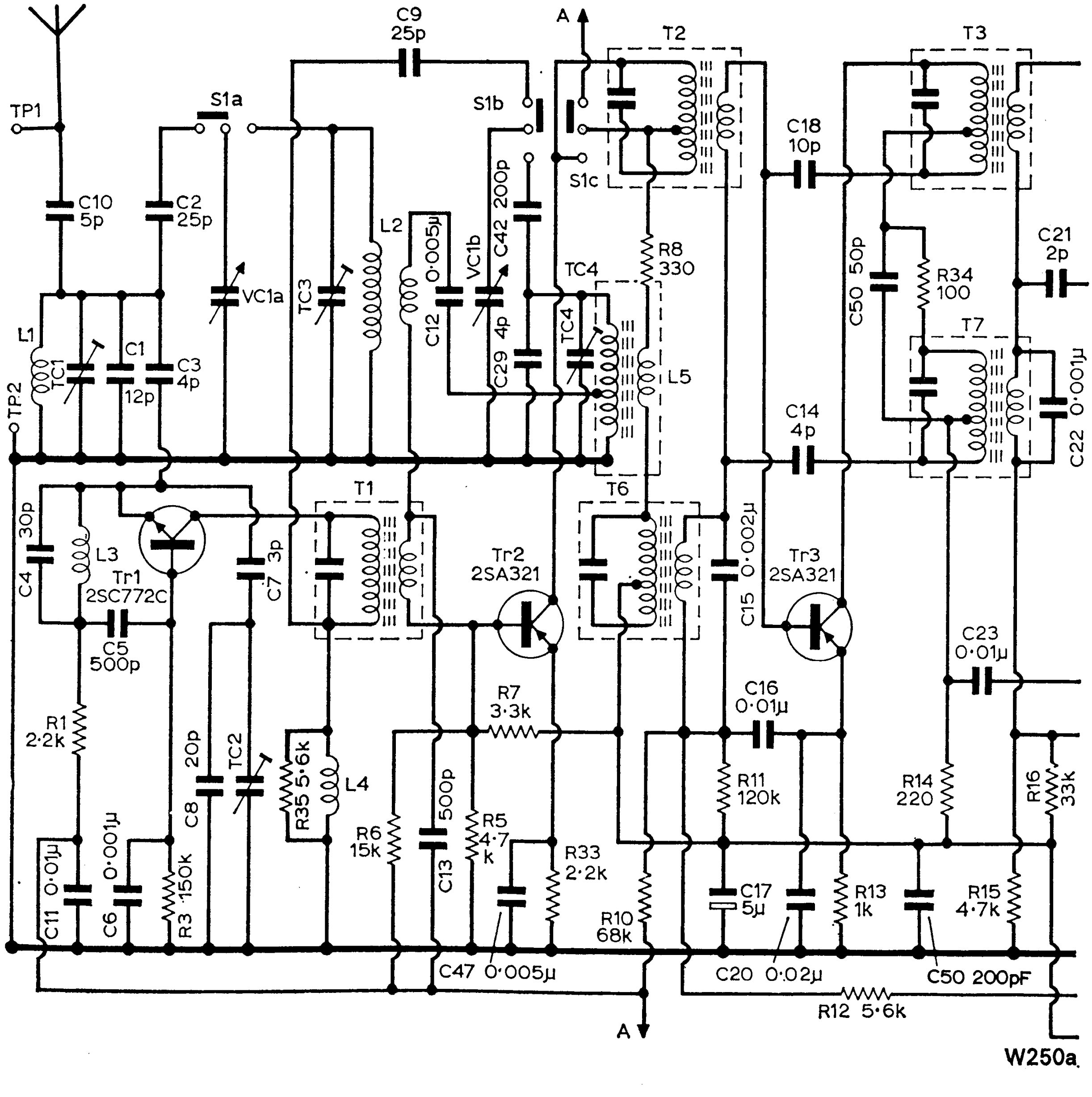
Waveband Coverage: M.W.: 555–188m; V.H.F.: 87–108MHz.

Battery: 9 volts (PP3 or equivalent). Quiescent current 12 mA.

Loudspeaker: 60 ohms impedance.

Alignment

General: Access to all cores, coils and trimmers is obtained on removing the receiver case back.



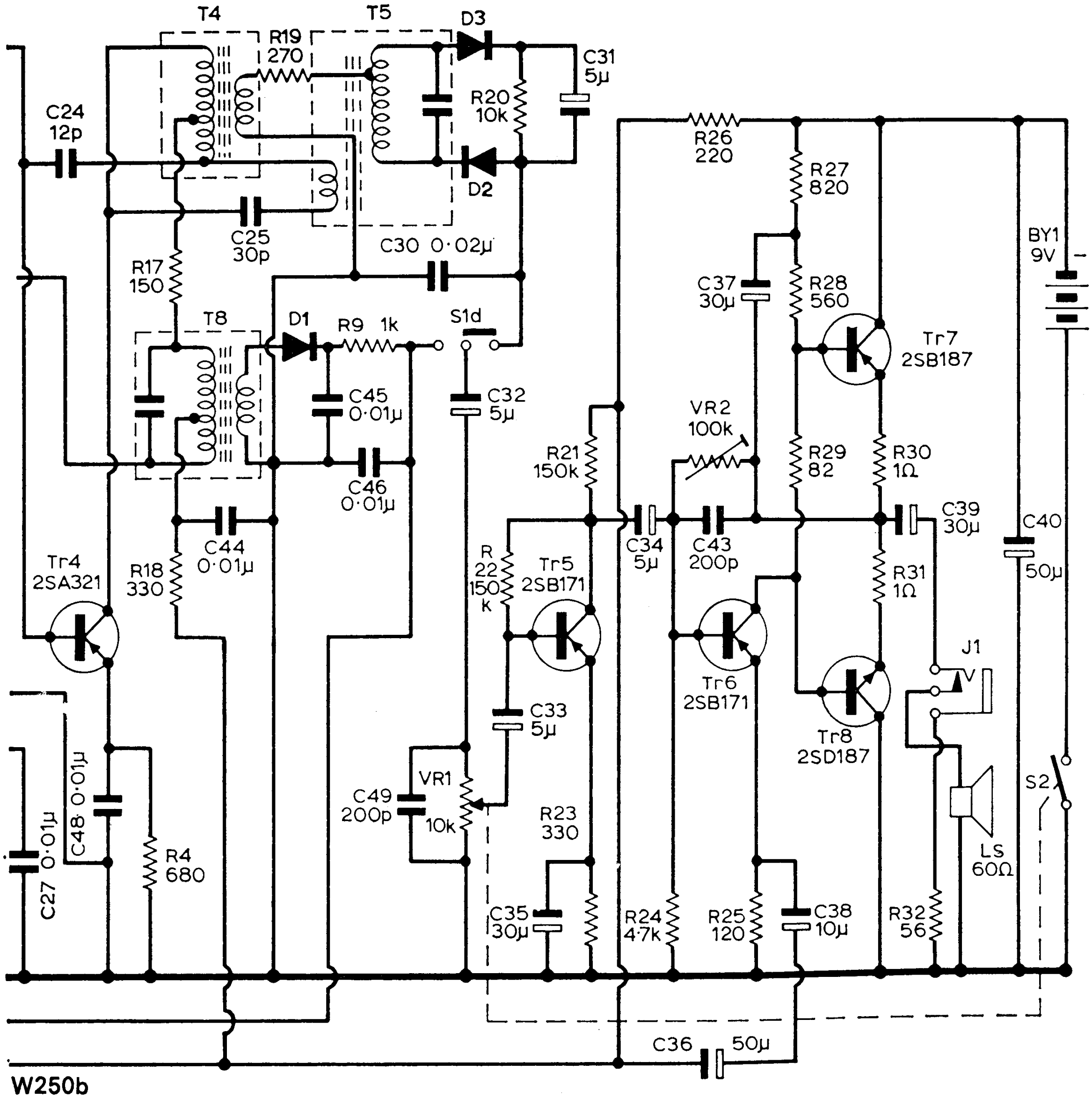
(W250a) Circuit Diagram—Model 665 (*Part*)

Connect output meter (60 Ω range) across loudspeaker; to avoid necessity of removing the circuit board it will be convenient to use the earphone socket.

For all a.m. alignment, test signals should be injected via a coupling loop placed near to, and coaxial with, the ferrite rod aerial. For F.M. alignment of the I.F. circuits, the test signal should be injected via the telescopic aerial. For F.M. alignment (R.F. circuits), the signals should be injected via a dummy aerial to the same injection point.

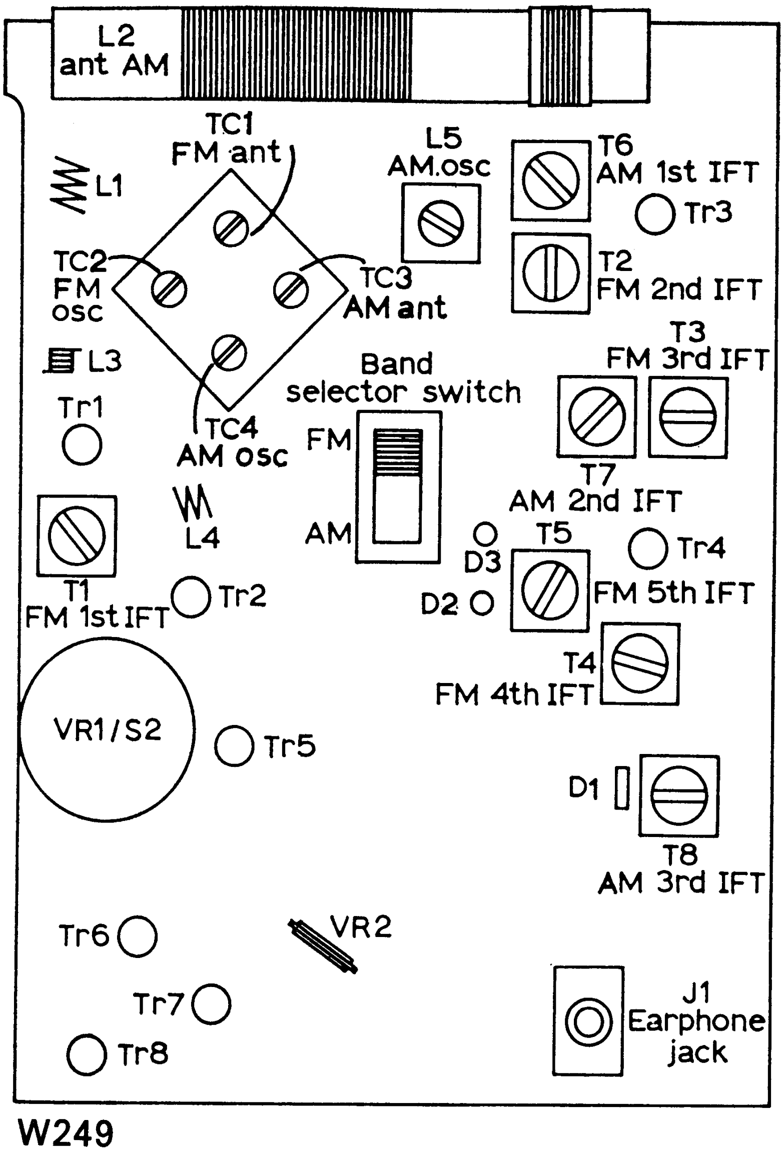
As circuits come into tune, the output from the signal generator should be progressively reduced and maintained at as low a level as reasonable to avoid misleading results due to A.G.C. action.

A.M. Alignment: I.F. Circuits: Tune receiver to the low frequency end of the a.m. band. Inject signal of 455 kHz and trim the cores of T8, T7 and T6, in that order, for maximum output. Repeat for optimum results.



W250b

(W250b) CIRCUIT DIAGRAM—MODEL 665 (*Continued*)



(W249) Main Components Layout—Model 665

A.M. Alignment: R.F. Circuits: Tune receiver to extreme low frequency end of band. Inject signal of 520 kHz and trim oscillator coil L5 for maximum output. Retune receiver to extreme high frequency end of band. Inject signal of 1,670kHz and adjust oscillator trimmer TC4 for maximum output.

Retune receiver to 500m (i.e. "50" on dial), inject signal of 600kHz and adjust aerial coil L2, by sliding it along the rod, for maximum output. Retune receiver to 200m (i.e., "20" on dial), inject signal of 1,500kHz and adjust aerial trimmer TC3 for maximum output.

Repeat a.m. adjustments for optimum results.

V.H.F. Alignment: I.F. Circuits: Switch to F.M. Tune receiver to extreme low frequency end of band. Inject signal of 10·7MHz and trim the cores of T5, T4, T3, T2 and T1 for maximum output. Repeat these adjustments.

V.H.F. Alignment: R.F. Circuits: Tune receiver to "87" mark. Inject signal of 87MHz and carefully adjust oscillator coil L4 for maximum output by slight adjustment of the spacing of the windings. Retune receiver to "108" mark. Inject signal of 108MHz and adjust oscillator trimmer TC2 for maximum output. Repeat these adjustments.

Retune receiver and signal generator to 87MHz and adjust aerial coil L1 for maximum output by careful adjustment of the spacing of the windings. Retune receiver and signal generator to 108MHz and adjust aerial trimmer TC1 for maximum output. Repeat these adjustments.

TRANSISTOR VOLTAGES

	Collector		*Base*		*Emitter*	
	A.M.	F.M.	A.M.	F.M.	A.M.	F.M.
Tr1	—	—	—	2·6	0·6	3·9
Tr2	8·4	6·8	1·0	2·0	0·8	1·8
Tr3	8·2	7·4	0·45	0·9	0·3	0·7
Tr4	8·0	7·6	0·9	0·8	0·7	0·6
Tr5	3·5	3·2	0·5	0·45	0·4	0·35
Tr6	4·7	4·6	0·55	0·55	·04	0·4
Tr7	8·8	8·75	4·85	4·8	4·75	4·7
Tr8	—	—	4·7	4·6	4·75	4·7

The above voltages were obtained under no signal conditions with the receiver tuned to the extreme low frequency end of the F.M. or A.M. band, volume control at maximum and using a 20,000Ω/V testmeter. Voltages are negative in relation to positive earth.